

PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 3177.1001002	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 03/ 10147	International filing date (day/month/year) 31/03/2003	(Earliest) Priority Date (day/month/year) 03/04/2002
Applicant SAINT-GOBAIN CERAMICS & PLASTICS, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. _____

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.

INTERNATIONAL SEARCH REPORT

In International Application No

PCT/US 03/10147

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C30B15/00 C30B29/26 H01L21/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C30B H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	US 2003/007520 A1 (GOODNIGHT KEVIN L ET AL) 9 January 2003 (2003-01-09) paragraph '0008! - paragraph '0009!; examples 1,2	1, 2, 26, 27
Y	US 5 530 267 A (BRANDLE JR CHARLES D ET AL) 25 June 1996 (1996-06-25) the whole document	1, 15, 16, 26, 34, 35
Y	US 6 104 529 A (BRANDLE JR CHARLES DAVID ET AL) 15 August 2000 (2000-08-15) column 2 -column 3	1, 15, 16, 26, 34, 35
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

4 August 2003

Date of mailing of the international search report

14/08/2003

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Authorized officer

Cook, S

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NIKISHIN S A ET AL: "GAS SOURCE MOLECULAR BEAM EPITAXY OF GAN WITH HYDRAZINE ON SPINEL SUBSTRATES"</p> <p>APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 72, no. 19, 11 May 1998 (1998-05-11), pages 2361-2363, XP000755963</p> <p>ISSN: 0003-6951</p> <p>the whole document</p>	1,15
A	<p>US 3 883 313 A (CULLEN GLENN WHERRY ET AL)</p> <p>13 May 1975 (1975-05-13)</p> <p>the whole document</p>	1,26,34
A	<p>EP 0 148 656 A (FRANCE ETAT)</p> <p>17 July 1985 (1985-07-17)</p> <p>example 1</p>	1,26
A	<p>HAISMA ET AL: "Lattice constant adaptable crystallographics"</p> <p>JOURNAL OF CRYSTAL GROWTH., vol. 102, 1990, pages 979-993, XP002250056</p> <p>NORTH-HOLLAND PUBLISHING CO. AMSTERDAM., NL</p> <p>ISSN: 0022-0248</p>	
A	<p>TAMURA K ET AL: "Epitaxial growth of ZnO films on lattice-matched ScAlMgO₄(0001) substrates"</p> <p>JOURNAL OF CRYSTAL GROWTH, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, vol. 214-215, June 2000 (2000-06), pages 59-62, XP004200964</p> <p>ISSN: 0022-0248</p> <p>the whole document</p>	1,7
A	<p>WYON ET AL. : "Czochralski growth and optical properties of magnesium-aluminium spinel doped with nickel"</p> <p>JOURNAL OF CRYSTAL GROWTH., vol. 79, pages 710-713, XP002250057</p> <p>NORTH-HOLLAND PUBLISHING CO. AMSTERDAM., NL</p> <p>ISSN: 0022-0248</p> <p>the whole document</p>	1,26

INTEF TIONAL SEARCH REPORT

Information on patent family members

Ir. tional Application No

PCT/US 03/10147

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003007520	A1	09-01-2003	FR 2826519 A1
			WO 02095887 A2
US 5530267	A	25-06-1996	EP 0732755 A2
			JP 3115814 B2
			JP 8288220 A
US 6104529	A	15-08-2000	US 2002191063 A1
US 3883313	A	13-05-1975	NONE
EP 0148656	A	17-07-1985	FR 2555157 A1
			DE 3477979 D1
			EP 0148656 A1
			US 4627064 A